

Fact Sheet Addendum For the Modification of the Industrial Stormwater General Permit

August 18, 2004

Reason for Modifying the Industrial Stormwater General Permit

On August 21, 2002 Ecology issued the current Industrial Stormwater General Permit. The permit was appealed to the Pollution Control Hearings Board (PCHB) by Snohomish County; The Boeing Company; and a coalition of environmental groups including Puget Sound Keeper Alliance, Waste Action Project, Washington Public Employees for Environmental responsibility, Resources for Sustainable Communities, Citizens for a Health Bay, and Washington Environmental Balance Inc. (Environmental Groups). The Association of Washington Business later joined the appeal as an intervening party.

(NOTE: Copies of all of the appeals, PCHB decisions, and settlement documents are available from the Department of Ecology WEB site at:
http://www.ecy.wa.gov/programs/wq/stormwater/industrial/permit_appeal.html They also can be obtained directly from Ecology by contacting Joyce Smith at (360) 407-6858)

The Pollution Control Hearings Board identified eleven separate appeal issues in their October 15, 2002 pre-hearing order:

1. Is it unlawful for Ecology to issue a General Stormwater Discharge Permit which does not authorize the discharge of non-stormwater pollutants? (Snohomish County and The Boeing Company)
2. Did Ecology err in issuing the Stormwater general permit which requires permittees to comply with the Stormwater Manual? (Snohomish County)
3. Is it unlawful for the permit to incorporate the Stormwater Manual by reference? (Snohomish County)
4. Are the requirements that later completed TMDLs become permit requirements legal? (Snohomish County)
5. Is the compliance schedule for existing discharges to impaired (303(d) listed) water bodies legal? (Environmental Groups)
6. Is the standard mixing zone contained in the permit legal? (Environmental Groups)
7. Are the monitoring requirements contained in the permit legal? (Environmental Groups)
8. Is it legal for Ecology to modify or waive permit requirements in writing? (Environmental Groups)
9. Is the provision for suspending monitoring legal? (Environmental Groups)
10. Are the reporting requirements in the permit legal? (Environmental Groups)
11. Are the permit fees established for the permit lawful? (Environmental Groups)

On March 31st, 2003 the Environmental appellants filed a motion with the PCHB requesting a summary judgment on three of the appeal issues. On June 6, 2003 the PCHB ruled, granting partial summary judgment to the Environmental groups. The PCHB ruled the compliance schedule in the industrial stormwater general permit was not legal (legal issue #5), the provisions for standard mixing zones contained in the permit were not legal (legal issue #6), and the provisions in the permit which allowed Ecology to modify or waive permit requirements in writing was also not legal (legal issue # 8).

A hearing was held on June 24, 2003 before the PCHB on the remaining eight appeal issues. At the hearing Ecology, the Boeing Company, Snohomish County and the Association of Washington Business offered a settlement proposal (Business side settlement) to settle issues one through four. The Environmental Groups did not oppose the settlement.

Also at the hearing Ecology and the Environmental Groups offered a settlement proposal to settle issues nine and ten (Environmental side settlement). None of the other parties opposed the settlement with the Environmental Groups. After reaching agreements with the business and environmental groups the only legal issues remaining to be heard at the June 24th hearing were issue #7 (monitoring requirements) and legal issue #11 (permit fees).

The PCHB eventually dismissed appeal issue #11, for lack of evidence and the sole issue remaining for the June 24th hearing was issue #7. On August 4th, 2003 the PCHB issued their final ruling on the Industrial Stormwater General Permit, which included their previous summary judgment rulings and their ruling on issue #7, monitoring requirements.

In late August and early September 2003, the AWB and Ecology appealed the PCHB's rulings on issue #5 (compliance schedules), issue #6 (mixing zones) and issue #7 (monitoring requirements). The Environmental Groups appealed the PCHB's ruling on issue #7 (monitoring requirements).

During the fall and early winter of 2003, Ecology, the AWB, and the Environmental Groups made several unsuccessful attempts to reach a negotiated settlement to the remaining three appeal issues.

Early in the 2004 Washington State Legislative session, legislation was introduced on behalf of the business community in both the Senate and the House in an attempt to resolve the ongoing Appeal of the Industrial Stormwater General Permit. Eventually Engrossed Substitute Senate Bill 6415 (ESSB 6415) was passed by the Senate (49-0) and the House (95-1) and signed into law by Governor Locke on March 31, 2004.

NOTE: The full legislative history of ESSB 6415 can be found at the Washington State Legislature bill information WEB site at:
<http://www.leg.wa.gov/wsladm/billinfo1/dspBillSummary.cfm?billnumber=6415>

The passage of ESSB6415 lead directly to an agreement between the AWB, the Environmental Groups, and Ecology to drop the on-going permit appeal and to proceed with the modification of

the Industrial Stormwater General Permit which incorporates the settlement agreements reached between Ecology and the appealing parties, the PCHBs rulings and the provisions of ESSB 6415.

Proposed Permit Modifications and Basis for the Proposed Modifications to the Industrial Stormwater General Permit

S1. PERMIT COVERAGE - No changes proposed

S2. COVERAGE REQUIREMENTS

S2.B.5 – delete reference to “expanded” mixing zone. The PCHB ruled against the *standard* mixing zones contained in the original permit. As a result of passage of ESSB 6415, the use of *standard* mixing zones in the permit has been eliminated. The use of mixing zones is still permitted under this permit however the procedure for obtaining all mixing zones must follow the procedure outlined in the original permit for obtaining an ‘expanded’ mixing zone.

S2.C – deleted all references to “unless otherwise authorized by Ecology in writing”. This change is proposed as a result of the PCHB ruling which concluded that these ‘authorizations’ represented a modification of the permit and as such must comply with the procedures in 40 CFR part 122.62, including public notice, comment and opportunity for appeal.

S2.E – deleted reference to expanded mixing zone. See explanation for S2.B.5 above.

S3. DISCHARGE LIMITATIONS

S3.A through S3.C – added conditionally approved non-stormwater discharges to the permit as a new permit condition S3.C. This issue was an appeal issue raised by the Boeing Company and Snohomish County. The language proposed in this permit modification was the result of a settlement agreement between Ecology, the Boeing Company, and the Association of Washington Business. The proposed list of authorized non-stormwater discharges is similar to the list contained in the EPA Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities. For each of the approved non-stormwater sources, except for discharges associated with firefighting activities and discharges associated with uncontaminated spring or ground water, the proposed changes would require the source be identified, characterized in terms of flow and likely pollutants. The non-stormwater discharge would also need to be evaluated to determine whether the discharge can be eliminated and if not eliminated whether the discharge will comply with state water quality standards.

S3.E – (was previously S3.D) Clarified the applicable list of 303(d) listed waters is the list which is in effect on September 20, 2002, or the 303(d) list in effect at the date when the first application for coverage is received by Ecology, which ever is later. Also clarified the applicable TMDLs or TMDL determinations are TMDLs which have been completed by the issuance date of the permit (September 20, 2002) or which have been completed prior to the date the first application for coverage is received. These changes are the result of a settlement agreement between Ecology, the Boeing Company, Snohomish County and the AWB.

S3.E.1 – Added text to improve clarity.

S3.E.2 and 3 – Under condition S3.E.2 of the original permit, existing facilities discharging into a 303(d) listed water body or into a water body for which a TMDL had been completed were to receive effluent limitations based on chapter 173-201A or as identified in the TMDL or listing documentation. The original permit also contained a six step compliance schedule for existing dischargers which were unable to initially comply with the effluent limitations. On August 4th 2003, the PCHB made final their earlier summary judgment ruling that the compliance schedule in the original permit was not legal.

During the 2004 legislative session, the Legislature passed Engrossed Substitute Senate Bill 6415 (ESSB 6415). ESSB 6415, which has the support of Ecology and both the business and environmental appellants, directs Ecology to modify the industrial stormwater general permit to require compliance by May 1, 2009 with appropriately derived numeric water quality-based effluent limitations for existing discharges to water bodies listed as impaired. The effect of this provision in ESSB 6415 was to eliminate the numeric effluent limitation for existing discharges to water bodies listed on the 303(d) list and replace it with a permit benchmark.

Under the original permit, condition S3.E.2 applied to both existing discharges to 303(d) listed waters and to discharges into water bodies which are subject to TMDL requirements. As a result of the permit appeal and the passage of ESSB 6415 the requirements for discharges to impaired or 303(d) listed water bodies are now different from the requirements for discharges to water bodies subject to a TMDL. This proposed permit modification would splits S3.E.2 into two subsections, S3.E.2 which would address existing facilities discharging into water bodies for which an applicable TMDL has been completed only and S3.E.3 which would address existing facilities discharging to water bodies listed on the 303(d) list.

The effluent limitations in the permit for existing facilities discharging to water bodies covered by an approved TMDL remain unchanged from the original permit. However, as part of this permit modification Ecology is now including a new Appendix 5 with the permit, which lists the permittees subject to this permit condition and the specific effluent limitation(s) and monitoring requirements. Up until this time permittees would have had to determine whether they are subject to this condition or potentially subject to this condition. For a number of reasons, few, if any, permittees were able to make this determination.

To develop the facility specific TMDL effluent limitations Ecology reviewed all of the TMDLs that have been approved to date in Washington state. When most of these TMDLs were developed, industrial stormwater was considered a subset of non-point dischargers, rather than a permitted discharge and as a result very few TMDLs contain explicit effluent limitations for industrial stormwater sources. Since circumstances have changed, Ecology made the following interpretations of TMDLs:

- If stormwater was identified as not a significant source of the pollutants of concern or if all the sources were defined and stormwater was not included, Ecology classified stormwater as not a significant contributor. No effluent limits were set since stormwater controls were not needed to comply with the TMDL.

- If stormwater was identified as a source and the TMDL or implementation plans developed to support the TMDL identified control measures less than or equivalent to the requirements of this permit (e.g. follow the stormwater manual, establish stormwater programs) Ecology set a narrative effluent limit. The limit is “compliance with this permit constitutes compliance with the TMDL.”
- If stormwater was identified as a source and specific waste load allocations, load allocations or control measures were established, Ecology developed effluent limits in addition to the other requirements of the permit. These effluent limits could be narrative or numeric depending on the control measures set by the TMDL or implementation plans.
- For fecal coliform TMDLs, Ecology did a further sort by SIC code. If based on the SIC code or description of the site, a fecal coliform source could reasonably be expected, Ecology set a limit and required monitoring. If based on activities on the site a fecal coliform source is not reasonably expected, Ecology did not set a limit. In accordance with the original permit (S4.F) all sites covered by fecal coliform TMDLs can be excused from monitoring if they certify that they do not have a source of fecal coliform as a part of their industrial activities.

As noted earlier the original permit contained effluent limitations based on state water quality standards for existing facilities which discharge into 303(d) listed water bodies. As a result of the passage of ESSB 6415 this effluent limitation is being converted into a benchmark in the proposed permit. Ecology is now including a new Appendix 4 with this proposed permit which lists the permittees subject to this permit condition, the specific benchmarks and monitoring requirements. Up until this time permittees would have had to determine whether they are subject to this condition or potentially subject to this condition. For a number of reasons, few, if any, permittees were able to make this determination.

The 303(d) benchmarks were set at the water quality standards at the sampling point. The water quality standards are described in several ways. For some parameters, the water quality standard is a single number. For example, the acute fresh water standard for total residual chlorine is 19.0 µg/L. In those cases, the 303(d) benchmark was set at the standard. In many cases, the water quality standard is based on the conditions in the receiving water. For example, the standard for silver is based on the hardness of the water. In these cases, Ecology calculated the 303(d) benchmark based on the best available information. If stream specific information was available it was used. If stream specific information was not available, Ecology used published literature values. If the literature showed a range of values, the 95th percentile value was used.

S3.F – Deleted references to “standard” mixing zones including the standard mixing zone dimensions in S3.F.2. Also this modified permit would eliminate the procedures for applying for and granting of standard mixing zones. See also explanation for S2.B.5 above.

S4. MONITORING REQUIREMENTS

S4.A – Ecology is proposing to relax the sample collection criteria as part of this permit modification. This proposed permit change is not a result of the permit appeal, litigation, settlement agreements or ESSB 6415. The reason for this proposed change is the reported

difficulty permittees have had in collecting stormwater runoff samples which meet all of the sample collection criteria outlined in the permit. Ecology has also experienced difficulty in collecting stormwater runoff samples which meet all of the sample collection criteria.

Under the original permit, samples must be collected within the first hour after a discharge begins from a qualifying storm event (first flush). A qualifying storm was defined as a storm with at least 0.1 inches of precipitation within a 24 hour period (intensity) which is preceded by at least 24 hours of no measurable precipitation. The sample collection changes being proposed by Ecology would make the sample collection criteria sample collection guidelines rather than permit requirements. Under the original permit if a permittee was not able to collect a stormwater sample which met all of the sample collection criteria, they were not required to submit sampling results. Ecology believes stormwater sampling results are important and provide valuable feedback to both the permittees and Ecology on the effectiveness of a facilities stormwater management practices. Ecology also believes relaxing the sample collection criteria will not significantly impair either Ecology or the permittees ability to draw conclusions about the effectiveness of stormwater management practices and the potential impact on water quality.

The proposed permit would require the collection, analysis, and submission of stormwater sampling results even if the sample collection criteria were not met. Ecology recognizes that there will be circumstances when a permittee is unable to collect a stormwater sample despite their best efforts. In these situations the permittee would be required to submit an explanation with their quarterly discharge monitoring report of why a sample was not collected. The continued failure to collect and submit sample results, particularly if other permittees nearby are submitting results, will be a flag for appropriate follow-up by Ecology.

S4.B.1 – Exceptions to sampling requirements at inactive and unstaffed sites. This proposed permit change is not a result of the permit appeal, litigation, settlement agreements or ESSB 6415. This change is the result of requests by some National Guard sites and other permittees to suspend the permit monitoring requirements at inactive and unstaffed sites. These sites are inactive and unstaffed due to various circumstances and the activities originally triggering the requirement for coverage under the industrial stormwater general permit have temporarily been eliminated. An example is a National Guard site where vehicle maintenance activities triggered the need for coverage under the Industrial Stormwater General Permit and the personnel and their equipment were mobilized and sent out of the Country.

The proposed change to the permit would allow inactive and unstaffed sites to apply for a waiver of the monitoring requirements in the permit. To be eligible for the monitoring waiver the permittee must certify that the pollutant generating activities at the site are temporarily no longer occurring at the site. The waiver request must also specify a start date and an estimated end date during which the site is both inactive and unstaffed.

S4.C – Monitoring Results Above Permit Benchmark Values. Condition S4.C is a new condition in the proposed permit. This condition along with other permit terms and conditions is intended to satisfy the requirement under state law for an enforceable adaptive management mechanism.

Engrossed Substitute Senate Bill 6415 passed by the 2004 Legislature included a requirement for an enforceable adaptive management process in industrial stormwater general permits.

Specifically Section 2(8) requires:

“(a) Construction and Industrial Stormwater General Permits issued by the department shall include an enforceable adaptive mechanism that includes appropriate monitoring, evaluation, and reporting. The adaptive management mechanism shall include elements designed to result in permit compliance and shall include, at a minimum, the following elements:

- (i) An adaptive management indicator, such as monitoring benchmarks;
- (ii) Monitoring;
- (iii) Review and revisions to the stormwater pollution prevention plan;
- (iv) Documentation of remedial actions taken; and
- (v) Reporting to the department.

(b) Construction and industrial storm water general permits issued by the department also shall include the timing and mechanism for implementation of treatment best management practices.”

The original permit contains both benchmarks and monitoring. The proposed permit establishes three escalating levels of response based on the frequency that monitoring results are above benchmark values and by how much the monitoring results are above the benchmarks.

The first level response (Level One Response) requires a site inspection each time a monitoring result is above benchmark values. The inspection must be done as promptly as possible, but no later than two weeks of receipt of the monitoring results. The inspection and results of the inspection must be documented and kept with the facilities SWPPP. A summary of the inspection results and remedial actions taken must be sent to Ecology along with the quarterly monitoring report.

The second level response (Level Two Response) is triggered if two quarterly samples out of the last four quarterly samples are above a specified action level in the permit. The third level response is triggered if four quarterly samples are above the specified action level in the permit.

Both the Level two and level three response require the permittee to:

- investigate all available options for source control, operational control, and stormwater treatment best management practices,
- implement additional source and operational best management practices identified as part of the investigation, and
- prepare and submit a report to Ecology on the actions taken, and planned to be taken.

The primary difference between the level two and level three responses is stormwater treatment is required to be installed if a level three response is triggered. The proposed permit includes a stormwater treatment waiver option. Permittees which are required under the permit to install stormwater treatment may request a waiver from the requirement to install stormwater treatment. To be eligible for the waiver the permittee must demonstrate to Ecology that the installation of stormwater treatment is infeasible and it is not necessary for compliance with state water quality

standards due to unique site conditions. Waivers must be reviewed and approved by Ecology as either a modification of permit coverage or through the issuance of an administrative order.

Ecology has established action values in this permit which are higher than the permit benchmarks. Monitoring results above the action values, particularly monitoring results which frequently are above the action values are more likely to indicate that water quality standards are being violated. In addition, monitoring results above action values indicate additional source and operational controls are necessary and that ultimately stormwater treatment may be necessary.

Benchmarks and action levels are not effluent limitations and monitoring results which are above these values are not permit violations. Benchmarks and the new action levels are indicator values. Values at or below benchmarks are considered unlikely to cause a water quality violation. As stormwater monitoring values increase in magnitude above benchmarks there is an increasing probability that water quality standards are being violated.

Monitoring results above the benchmarks and action values trigger mandatory responses by the permittee. It is a permit violation if the permittee does not take the required actions triggered by the monitoring results.

Except for copper, lead, and zinc, the action values were set at twice the benchmark values. The action levels for copper, lead, and zinc were derived from the benchmarks for these metals and data from the State of California.

The benchmarks for these metals are from the EPA Industrial Stormwater General Permit. EPA proposed these benchmarks as generally protective of water quality standards. To derive the action levels the benchmarks were assumed to be long term averages (LTA) protective of water quality. The objective of the permit is to assure these levels are generally being met on a long term basis.

The permit establishes an action level derived by using techniques used by EPA for deriving limits. This process reduces the probability of false positives. The action levels were derived using the benchmarks as long term averages and adding a variability factor. The variability of copper, lead and zinc in stormwater (as total recoverable) was calculated from data produced by the State of California in their highway runoff program. The data from California was used because it is a very large data set collected from multiple years and sufficient data from Washington is not yet available.

The action level for metals were calculated as the benchmark value plus one standard deviation for each metal.

Table 1: Action Levels for Metals			
	Benchmark	Standard Deviation	Action Level
Copper	63.6	85.1	148.7
Lead	81.6	77	158.6
Zinc	117	255	372

Assuming that the values are normally distributed, any single value higher than the action level would mean that the long term average stormwater runoff levels at the site are above the benchmark with a 33.3% probability of error. Multiple values above the action level reduces the probability of a false positive error to near 0. For example if two values are above the action level there is a 90% probability that the long term average concentration of stormwater runoff is above the benchmark. If four values are above the action level the probability increases to almost 99% and a 1% error of false positive.

Information on stormwater variability for other benchmark parameters was not available so action levels for non-metal parameters were set at twice the benchmark values which is consistent with the action levels for metals.

S4.D.1 – Visual monitoring reports must now be summarized and attached to the permittees SWPPP. Quarterly visual monitoring reports must now be signed and must now include a statement based on the judgment of the person doing the inspection whether the facility is in compliance or out of compliance with the SWPPP and the permit. This new proposed language is the result of a settlement agreement between Ecology and the Environmental appellants. The new requirements for documentation and certification of stormwater visual inspections brings the permit into conformance with 40 CFR 122.44(i)(4).

S4.E – provided clarification that the existing provision in the permit for reducing monitoring requirements would be implemented through the issuance of administrative orders.

S4.G – Under the original permit, monitoring for existing facilities discharging into 303(d) listed waters or waters subject to a TMDL determination was supposed to begin the second quarter of 2003. When the original permit was issued Ecology intended to notify each discharger subject to this permit requirement before the beginning of the second quarter of 2003. For a number of reasons Ecology was not able to identify the dischargers subject to the condition and provide them with specific monitoring requirements.

Ecology has developed a list (appendix 4) of permittees which discharge to 303(d) listed waters. Ecology has also developed a list of dischargers subject to TMDL determinations in Appendix 5. With this permit modification Ecology is proposing to change the first sampling period from the second quarter of 2003 (April, May, June, 2003) to the first quarter 2005. This change is an acknowledgement that most dischargers were not aware of whether they discharged to a listed water body or to a water body subject to a TMDL determination and could not have reasonably made that determination without assistance from Ecology. Ecology was not able to make that determination until very recently.

Under the proposed permit existing dischargers which discharge to 303(d) listed waters would have to monitor monthly rather than quarterly for the pollutants for which the water body was listed. The change in monitoring frequency to monthly was the result of settlement discussions between the appealing parties and Ecology during the development of ESSB 6415.

S4.G.1 – The original permit provided that the discharger may suspend monitoring if they can demonstrate to Ecology after eight or more consecutive samples that there is no reasonable potential to violate water quality standards. This provision allowing the suspension of monitoring was one of the issues raised on appeal and for which a settlement was reached. Under the settlement agreement no reasonable potential was defined as no single sample exceeding eighty percent of the effluent limitation and the average of the last eight consecutive quarterly samples is less than sixty percent of the effluent limitation. Since the agreement was reached on the specific language in S4.G.1.b subsequent agreements were reached which eliminated numeric effluent limitations for existing dischargers which discharge to 303(d) limited waters until May 2009. Also the monitoring frequency for these dischargers was increased to monthly. Ecology is bound by the settlement agreement to put out for public comment the language as it currently exists in the proposed draft permit. Because of the apparent conflict between two of the settlement agreements the language in the final permit will need further clarification.

S4.I – Analytical Procedures for Monitoring Requirements. The original permit language allowed Ecology to approve alternative analytical procedures if it is done “in writing”. In general, the PCHB ruled the permit language “unless otherwise approved in writing” amounted to an permit modification and must follow the requirements for permit modifications contained in 40 CFR 122.62 (Major Modifications) and 40 CFR 122.63 (minor modifications). The proposed addition to the permit would allow the continued approval of alternative analytical methods provided the alternative method has an equivalent or better quantitation level.

S5.F – Public Access to Stormwater Pollution Prevention Plans. This proposed condition is a result of a settlement agreement between Ecology and the Environmental appellants. The development and implementation of facility specific SWPPPs is one of the most important parts of this permit and is critical to the successful control of stormwater pollution. Concerns were raised that interested public have an opportunity to review and comment on the adequacy of SWPPPs. The proposed permit modification allowing interested members of the public to directly request copies of SWPPPs from permittees is similar to provisions in the EPA multisector industrial stormwater general permit.

S6. Conditional “No Exposure” Certificate – No proposed changes

S7. Compliance with Standards

S7.E – This proposed permit modification would provide that compliance with water quality standards is presumed if the permittee is in full compliance with all terms and conditions of the permit unless there is site specific information to demonstrate otherwise. This proposed permit modification is from ESSB 6415.

S8. Operation and Maintenance – No proposed changes

S9. Stormwater Pollution Prevention Plans

All the proposed modifications to this section of the permit were the result of the settlement agreement between Ecology and Snohomish County, the AWB and the Boeing Company. The proposed changes clarify how the stormwater technical manuals are referenced in the permit.

Proposed Changes to the Application (notice of intent)

As part of this permit modification, Ecology is also proposing to update the application for coverage to reflect the changes in the permit and improve clarity. Some of the proposed changes include:

- The new fee rule structure established as a result of ESSB 6415 requires that Ecology use the company's Universal Business Identifier (UBI) number. Ecology has added this requirement for UBI numbers to the permit application.
- The option for requesting a *standard* mixing zone was removed from the application.
- In the 2002 permit, facilities that meet the no exposure requirement could apply for a conditional no exposure certification. We have included information regarding this process and the no exposure web address to the instructions.